



DESALINATION MACHINE

ABSTRACT

A compact array of vertical rising film evaporators is disclosed in an evacuated multi-effect process, for desalination of seawater, using waste heat of thermal machines. Vapour produced in one stage is the heat source for the next. This invention is based on a concentric disposition of three different evaporators, at which the first stage is a shell and tube evaporator built in a ring format, where is inserted inside the intermediate stage that is a bundle of vertical tubes in a ring format, and the last stage that is a bundle of vertical tubes placed inside the intermediate stage. By this arrangement, vapour pipelines are eliminated, dimensions are reduced, and heat transfer is improved per the rising film evaporators compared to falling film.